

In the Claims

1. (Previously Presented) A method to provide a multicast service, comprising:
maintaining multicast service information at an application server, the multicast service information describing a multicast service having an associated subscriber, the multicast service operates to deliver multicast content from a multicast source;
determining a cell supporting a user device associated with the subscriber;
initiating creation of a bearer path for the multicast service; and
directing an enabler mobile to facilitate delivery of the multicast content to the user device using the bearer path, the enabler mobile located in the cell for which the enabler mobile enables delivery, the enabler mobile substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler mobile further distinct from a base station controller.
2. (Original) The method of Claim 1, wherein initiating creation of the bearer path for the multicast service further comprises:
determining an enabler mobile corresponding to the cell supporting the user device;
and
instructing the enabler mobile to initiate creation of a radio access bearer.
3. (Previously Presented) The method of Claim 1, further comprising communicating one or more parameters associated with the bearer path to the user device, the user device operates to use the parameters to receive the multicast content.
4. (Original) The method of Claim 1, further comprising establishing a multicast service level of the multicast service in accordance with the cell supporting the user device.

5. (Original) The method of Claim 1, further comprising performing a power control operation by:

determining a signal power;

calculating power control information from the signal power; and

initiating adjustment of the signal power according to the power control information.

6. (Previously Presented) A server to provide a multicast service, comprising:
a memory operates to store multicast service information, the multicast service information describing a multicast service having an associated subscriber, the multicast service operates to deliver multicast content from a multicast source; and
one or more processors coupled to the memory and operate to:
determine a cell supporting a user device associated with the subscriber;
initiate creation of a bearer path for the multicast service; and
direct an enabler mobile to facilitate delivery of the multicast content to the user device using the bearer path, the enabler mobile located in the cell for which the enabler mobile enables delivery, the enabler mobile substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler mobile further distinct from a base station controller.

7. (Previously Presented) The server of Claim 6, wherein the one or more processors operate to initiate creation of the bearer path for the multicast service by:
determining an enabler mobile corresponding to the cell supporting the user device;
and
instructing the enabler mobile to initiate creation of a radio access bearer.

8. (Previously Presented) The server of Claim 6, wherein the one or more processors further operate to communicate one or more parameters associated with the bearer path to the user device, the user device operable to use the parameters to receive the multicast content.

9. (Previously Presented) The server of Claim 6, wherein the one or more processors further operate to establish a multicast service level of the multicast service in accordance with the cell supporting the user device.

10. (Previously Presented) The server of Claim 6, wherein the one or more processors further operate to perform a power control operation by:

determining a signal power;

calculating power control information from the signal power; and

initiating adjustment of the signal power according to the power control information.

11. (Previously Presented) A computer readable medium encoded with computer executable logic to provide a multicast service, the logic operable to:

maintain multicast service information at an application server, the multicast service information describing a multicast service having an associated subscriber, the multicast service operable to deliver multicast content from a multicast source;

determine a cell supporting a user device associated with the subscriber;

initiate creation of a bearer path for the multicast service; and

direct an enabler mobile to facilitate delivery of the multicast content to the user device using the bearer path, the enabler mobile located in the cell for which the enabler mobile enables delivery, the enabler mobile substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler mobile further distinct from a base station controller.

12. (Previously Presented) The computer readable medium of Claim 11, the logic further operable to initiate creation of the bearer path for the multicast service by:

determining an enabler mobile corresponding to the cell supporting the user device;
and

instructing the enabler mobile to initiate creation of a radio access bearer.

13. (Previously Presented) The computer readable medium of Claim 11, the logic further operable to communicate one or more parameters associated with the bearer path to the user device, the user device operates to use the parameters to receive the multicast content.

14. (Previously Presented) The computer readable medium of Claim 11, the logic further operable to establish a multicast service level of the multicast service in accordance with the cell supporting the user device.

15. (Previously Presented) The computer readable medium of Claim 11, the logic further operable to perform a power control operation by:

- determining a signal power;
- calculating power control information from the signal power; and
- initiating adjustment of the signal power according to the power control information.

16. (Previously Presented) A method to provide a multicast service, comprising:
receiving at an enabler device an instruction to create a radio access bearer for a multicast service, the multicast service operates to deliver multicast content from a multicast source, the enabler device assigned to a cell supporting a user device;

- creating the radio access bearer for the multicast service in response to the instruction;

- opening a Packet Data Protocol context for the radio access bearer; and

- directing the enabler device to facilitate delivery of the multicast content to the user device using the radio access bearer, the enabler device located in the cell for which the enabler device enables delivery, the enabler device substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler device further distinct from a base station controller.

17. (Original) The method of Claim 16, further comprising communicating one or more parameters associated with the radio access bearer to an application server.

18. (Previously Presented) An enabler device to provide a multicast service, comprising:

an interface operates to receive an instruction to create a radio access bearer for a multicast service, the multicast service operates to deliver multicast content from a multicast source, the enabler device located in a cell supporting a user device, the enabler device located in the cell for which the enabler device enables delivery of multicast content, the enabler device substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler device further distinct from a base station controller; and

one or more processors coupled to the interface and operate to:

create the radio access bearer for the multicast service in response to the instruction;

open a Packet Data Protocol context for the radio access bearer; and

enable delivery of the multicast content to the user device using the radio access bearer.

19. (Currently amended) The enabler device of Claim 18, wherein the one or more processors further operate to communicate one or more parameters associated with the radio access bearer to an application server.

20. (Previously Presented) A computer readable medium encoded with computer executable logic to provide a multicast service, the logic operable to:

receive at an enabler device an instruction to create a radio access bearer for a multicast service, the multicast service operates to deliver multicast content from a multicast source, the enabler device assigned to a cell supporting a user device;

create the radio access bearer for the multicast service in response to the instruction;

open a Packet Data Protocol context for the radio access bearer; and

direct the enabler device to facilitate delivery of the multicast content to the user device using the radio access bearer, the enabler device located in the cell for which the enabler device enables delivery, the enabler device substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler device further distinct from a base station controller.

21. (Previously Presented) The computer readable medium of Claim 20, the logic further operable to communicate one or more parameters associated with the radio access bearer to an application server.

22. (Previously Presented) A method to provide a multicast service, comprising:
activating at a multicast gateway support node a Packet Data Protocol context for a multicast service, the multicast service facilitated by a plurality of enabler mobiles located in one or more cells, the plurality of enabler mobiles operates to deliver multicast content from a multicast source, each enabler mobile of the plurality of enabler mobiles substantially fixed in position and distinct from a base station operable to communicate the multicast content from the multicast source, each enabler mobile of the plurality of enabler mobiles further distinct from a base station controller, each enabler mobile located in the cell for which the enabler mobile enables delivery of multicast content;
receiving an instruction to join a multicast tree for the multicast service; and
joining the multicast tree in response to the instruction.

23. (Previously Presented) The method of Claim 22, further comprising:
receiving the multicast content communicated using a plurality of data packets; and
duplicating the data packets to create duplicated data packets for each enabler mobile of the plurality of enabler mobiles.

24. (Previously Presented) A node to provide a multicast service, comprising:
an interface operates to:

receive an instruction to activate a Packet Data Protocol context for a multicast service, the multicast service facilitated by a plurality of enabler mobiles located in one or more cells, the plurality of enabler mobiles operates to deliver multicast content from a multicast source, each enabler mobile of the plurality of enabler mobiles substantially fixed in position and distinct from a base station operable to communicate the multicast content from the multicast source, each enabler mobile of the plurality of enabler mobiles further distinct from a base station controller, each enabler mobile located in a cell for which the enabler mobile enables delivery of multicast content; and

receive an instruction to join a multicast tree for the multicast service; and
one or more processors coupled to the interface and operate to:

activate the Packet Data Protocol in response to the instruction to activate the Packet Data Protocol context; and

join the multicast tree in response to the instruction to join the multicast tree.

25. (Previously Presented) The node of Claim 24, wherein:

the interface operates to receive the multicast content communicated using a plurality of data packets; and

the one or more processors operate to duplicate the data packets to create duplicated data packets for each enabler mobile of the plurality of enabler mobiles.

26. (Previously Presented) A computer readable medium encoded with computer executable logic to provide a multicast service, the logic operable to:

activate at a multicast gateway support node a Packet Data Protocol context for a multicast service, the multicast service facilitated by a plurality of enabler mobiles located in one or more cells, the plurality of enabler mobiles operates to deliver multicast content from a multicast source, each enabler mobile of the plurality of enabler mobiles substantially fixed in position and distinct from a base station operable to communicate the multicast content from the multicast source, each enabler mobile of the plurality of enabler mobiles further distinct from a base station controller, each enabler mobile located in a cell for which the enabler mobile enables delivery of multicast content;

receive an instruction to join a multicast tree for the multicast service; and

join the multicast tree in response to the instruction.

27. (Previously Presented) The computer readable medium of Claim 26, the logic further operable to:

receive the multicast content communicated using a plurality of data packets; and

duplicate the data packets to create duplicated data packets for each enabler mobile of the plurality of enabler mobiles.

28. (Previously Presented) A method to provide a multicast service, comprising:
maintaining multicast service information at an application server, the multicast service information describing a multicast service having an associated subscriber, the multicast service operates to deliver multicast content from a multicast source;

initiating creation of a bearer path for the multicast service by communicating an instruction from the application server to at least one enabler mobile of a plurality of enabler mobiles, the instruction to create a radio access bearer for the multicast service, the at least one enabler mobile of the plurality of enabler mobiles associated with a cell supporting a user device associated with the subscriber; and

directing the at least one enabler mobile of the plurality of enabler mobiles to facilitate delivery of the multicast content to the user device using the bearer path, the plurality of enabler mobiles located in one or more cells, each enabler mobile of the plurality of enabler mobiles substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, each enabler mobile of the plurality of enabler mobiles further distinct from a base station controller.

29. (Currently amended) The method of Claim 28, wherein ~~directing a~~ directing the at least one enabler mobile of the plurality of enabler mobiles to facilitate delivery of the multicast content to the user device using the bearer path, the plurality of enabler mobiles located in one or more cells further comprises:

activating at a multicast gateway support node a Packet Data Protocol context for the multicast service; and

joining the multicast gateway support node to a multicast tree for the multicast service.

30. (Previously Presented) The method of Claim 28, further comprising communicating one or more parameters associated with the bearer path to the user device, the user device operates to use the parameters to receive the multicast content.

31. (Previously Presented) The method of Claim 28, further comprising establishing a multicast service level of the multicast service in accordance with, at least one of the cells supporting the user device and a subscription of the subscriber.

32. (Previously Presented) The method of Claim 28, further comprising:
receiving at a multicast gateway support node the multicast content communicated using a plurality of data packets; and
duplicating the data packets to create duplicated data packets for each enabler mobile of the plurality of enabler mobiles.

33. (Previously Presented) A system to provide a multicast service, comprising:
an application server operates to:

maintain multicast service information describing a multicast service having
an associated subscriber, the multicast service operates to deliver multicast content from a
multicast source; and

initiate creation of a bearer path for the multicast service by communicating
an instruction to create a radio access bearer for the multicast service; and

an enabler device associated with a cell supporting a user device associated with the
subscriber, the enabler device substantially fixed in position and distinct from a base station
operable to communicate the multicast content to the user device, the enabler device further
distinct from a base station controller, the enabler device located in the cell and operates to:

receive the instruction to create the radio access bearer for the multicast
service;

create the radio access bearer in response to the instruction; and

enable delivery of the multicast content to the user device using the bearer
path, the enabler device located in the cell for which the enabler device enables delivery.

34. (Previously Presented) The system of Claim 33, further comprising a
multicast gateway support node operates to:

activate a Packet Data Protocol context for the multicast service; and

join the multicast gateway support node to a multicast tree for the multicast service.

35. (Previously Presented) The system of Claim 33, the application server further
operates to communicate one or more parameters associated with the bearer path to the user
device, the user device operates to use the parameters to receive the multicast content.

36. (Previously Presented) The system of Claim 33, the application server further
operates to establish a multicast service level of the multicast service in accordance with at
least one of the cell supporting the user device and a subscription of the subscriber.

37. (Previously Presented) The system of Claim 33, further comprising a multicast gateway support node operates to:

receive the multicast content communicated using a plurality of data packets; and

duplicate the data packets to create duplicated data packets for each enabler mobile of a plurality of enabler mobiles.

38. (Previously Presented) A computer readable medium encoded with computer executable logic to provide a multicast service, the logic operable to:

maintain multicast service information at an application server, the multicast service information describing a multicast service having an associated subscriber, the multicast service operates to deliver multicast content from a multicast source;

initiate creation of a bearer path for the multicast service by communicating an instruction from the application server to an enabler device, the instruction creates a radio access bearer for the multicast service, the enabler device located in a cell supporting a user device associated with the subscriber, the enabler device substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler device further distinct from a base station controller; and

enable delivery, by the enabler device, of the multicast content to the user device using the bearer path, the enabler device located in the cell for which the enabler device enables delivery.

39. (Previously Presented) The computer readable medium of Claim 38, the logic further operable to enable delivery of the multicast content to the user device using the bearer path by:

activating at a multicast gateway support node a Packet Data Protocol context for the multicast service; and

joining the multicast gateway support node to a multicast tree for the multicast service.

40. (Previously Presented) The computer readable medium of Claim 38, the logic further operable to communicate one or more parameters associated with the bearer path to the user device, the user device operates to use the parameters to receive the multicast content.

41. (Previously Presented) The computer readable medium of Claim 38, the logic further operable to establish a multicast service level of the multicast service in accordance with at least one of the cell supporting the user device and a subscription of the subscriber.

42. (Previously Presented) The computer readable medium of Claim 38, the logic further operable to:

receive at a multicast gateway support node the multicast content communicated using a plurality of data packets; and

duplicate the data packets to create duplicated data packets for each enabler mobile of a plurality of enabler mobiles.

43. (Previously Presented) A system to provide a multicast service, comprising:
- means for maintaining multicast service information at an application server, the multicast service information describing a multicast service having an associated subscriber, the multicast service operates to deliver multicast content from a multicast source;
 - means for initiating creation of a bearer path for the multicast service by communicating an instruction from the application server to an enabler device, the instruction creates a radio access bearer for the multicast service, the enabler device located in a cell supporting a user device associated with the subscriber, the enabler device substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler device further distinct from a base station controller; and
 - means for enabling delivery of the multicast content to the user device using the bearer path, the means for enabling delivery located in the cell for which the means for enabling delivery enables delivery.

44. (Previously Presented) A method to provide a multicast service, comprising:

- maintaining multicast service information at an application server, the multicast service information describing a multicast service having an associated subscriber, the multicast service operates to deliver multicast content from a multicast source;
- establishing a multicast service level of the multicast service in accordance with a cell supporting a user device of a plurality of user devices, the user device associated with the subscriber;
- initiating creation of a bearer path for the multicast service by communicating an instruction from the application server to an enabler device of a plurality of enabler devices, the instruction creates a radio access bearer for the multicast service, the enabler device located in the cell supporting the user device associated with the subscriber, the enabler device substantially fixed in position and distinct from a base station operable to communicate the multicast content to the user device, the enabler device further distinct from a base station controller;
- enabling delivery, by the enabler device, of the multicast content to the user device using the bearer path by:
 - activating at a multicast gateway support node a Packet Data Protocol context for the multicast service; and
 - joining the multicast gateway support node to a multicast tree for the multicast service, the enabler device located in the cell for which the enabler device enables delivery;
- communicating one or more parameters associated with the bearer path to the user device, the user device operates to use the parameters to receive the multicast content;
- receiving at the multicast gateway support node the multicast content communicated using a plurality of data packets; and
- duplicating the data packets to create duplicated data packets for each enabler device of the plurality of enabler devices.